

Work Order ID 140531

Thursday, January 07, 2016 1:24:06 PM

140531

Page 1

Item ID: D4287-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Uhmw U-Channel
Start Date: 1/7/2016 Start Qty: 40.00 ***40*** Cust Item ID:
Required Date: 1/7/2016 Req'd Qty: 40.00 ***40*** Customer:
Reference:

Approvals: Process Plan: MLS Date: JAN 07 2016 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4287	A

100 0.00 **DAS 13 9-89** JAN 12 2016 40

100

Purchasing Memo 0.00
Purchasing Issue P/O: 30969
Material: UHMW (white)
Supplier P#: McMaster-Carr 8672K31
Material release note required

110 0.00
110
Packaging Memo 0.01
Packaging

110

Receive & Inspect for Damage & Mat'l Certs
40 SP 16-01-15.

120 0.00
120
QC Memo 0.00
Quality Control

120

QC 40 JAN 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Page 2

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>ST-079A</u>	0.00						DA: 6	
130						40		9-6	
Packaging	Memo	0.01							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.07							
Quality Control									

JAN 18 2016

MLJ JAN 18 2016

MLJ JAN 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

Thursday, January 07, 2016 1:24:09 PM

Page 1

Work Order ID: 140531

140531

Parent Item: D4287-3

D4287-3

Parent Item Name: Uhmw U-Channel

Start Date: 1/7/2016

Required Date: 1/7/2016

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP Rev:A 10.11.15 new issue DD Verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
8672K31		Purchased	No			110	f	0.0000	1	40			
8672K31									**	40			
UHMW U-Channel													

40 SP 16-01-15.

DQA: _____ Date: _____



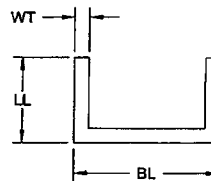
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐							

SPECIFICATION CONTROL DRAWING



SEED COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
ORDER

140531 MW

16-01-07

D4287-X UHMW U-CHANNEL

DART PART NUMBER	POSSIBLE SUPPLIER	SUPPLIER PART NUMBER	MATERIAL	PURCHASED LENGTH	BASE LENGTH (BL)	LEG LENGTH (LL)	WALL THICKNESS (WT)	WEIGHT (lbs)
D4287-1	McMASTER-CARR	9928K53	UHMW (WHITE)	96.0	1.05	0.75	0.250	2.11
D4287-3	McMASTER-CARR	8672K31	UHMW (WHITE)	96.0	1.25	0.75	0.125	1.29

RELEASED
2010-11-03
JWP

NOTES:

- 1) MATERIAL: PURCHASE PER TABLE
OR
UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF. DART SPEC. MUHMW
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: NONE
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: PER TABLE

A	NEW ISSUE	MB	10.10.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.10.26		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. DSC-D4287	REV. A
TITLE UHMW U-CHANNEL	SCALE NTS
COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30969**

Purchase Order Date 1/12/2016

PO Print Date 1/12/2016

Page Number 1 of 7

Order From :

VU-MCM001

MCMASTER-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
JAN 12 2016

Contact Name

Vendor Phone 330 995 5500

Ship To Contact

Ship To Phone

Ship Via:

Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	8672K31 ✓ AS PER DWG D4287 REV. A B140531	UHMW U-Channel	1/14/2016 Yes 1/14/2016		40.00 f	\$3.26	\$130.40
Line Total:							\$130.40
2	9928K53 AS PER DWG D4287 REV. A B140534	UHMW U-Channel	1/14/2016 Yes 1/14/2016		24.00 f	\$2.28	\$54.72
Line Total:							\$54.72
3	95606A170 AS PER DWG D3631 REV. A B140533	Washer	1/14/2016 Yes 1/14/2016		100.00 Each	\$0.09	\$8.60

Note:

1/12/2016

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO30969

Order Placed By
Chantal Lavoie

McMaster-Carr Number
5554149-01

Page 1 of 1

01/12/2016

Line	Product	Ordered	Shipped
1	8672K31 UHMW Polyethylene Trim, Screw Mount, U-Shape, 1" Inside Width	40 Feet	40
2	9928K53 Impact-Resistant UHMW Polyethylene U-Channel, 1" Base X 3/4" Legs, 1/4" Thick, 8' Long	24 Feet	24
3	95606A170 Nylon Flat Washer, 7/16" Screw Size, 0.500" ID, 0.688" OD, Off-White, Packs of 100	1 Pack	1
4	92311A599 18-8 Stainless Steel Cup Point Set Screw, 5/16"-24 Thread, 5/8" Long, Packs of 50	2 Packs	2
5	6718K52 Stainless Steel Industrial-Shape Hose Coupling, Plug, 1/4" NPTF Female, 1/4 Coupling Size	5 Each	5
6	3481T8 Reflective Aluminum Parking Sign, 12" X 18", "Visitor Parking Only"	2 Each	2
7	8841A21 Multi-Diameter Step Drill Bit, High-Speed-Steel, 13 Sizes, 1/8"-1/2", 1/4" Shank Diameter, 1/8" Max Thickness	8 Each	8
8	3814A301 8-Point Breakaway Blade for, Breakaway-Blade Knife, Packs of 100	2 Packs	2
9	8855K34 1006-1008 Carbon Steel Wire, Galvanized, .063" Diameter, 100-lb Coil, 9600' Coil	1 Each	1
10	9434T17 Steel Clamp with One Mounting Hole, 1/2" ID, Packs of 50	2 Packs	2
11	2424A55 Conduit Bender, 1/2 EMT Capacity, Aluminum	1 Each	1
12	2424A65 Conduit Bender, 3/4 EMT, 1/2 IMC & Rigid Capacity, Aluminum	1 Each	1
13	69995K84 Battery Box, 11-3/4" H X 11" W X 7-7/8" D Inside, Polypropylene	1 Each	1
14	4424A506 Flexible Cylinder Hone, for Aluminum & Soft Metals, 7/8" Cylinder ID, 320 Grit	1 Each	1
15	4424A506 Flexible Cylinder Hone, for Aluminum & Soft Metals, 7/8" Cylinder ID, 600 Grit	1 Each	1
16	91732A368 18-8 Stainless Steel Standard Helical Insert, 1/4"-20 Internal Thread, .25" Length, MS122081, Packs of 10	3 Packs	3
17	2684A29 Through-Hole Tap for Steel, Stainless Steel, & Fiberglass, 4-40 Thread Size	3 Each	3

Sp/6 01-15

McMaster-Carr Supply Company
200 Aurora Industrial Pkwy
Aurora, OH 44202-8087 USA
Phone: 330-995-5500 Fax: 330-995-9600
E-Mail: cle.sales@mcmaster.com
Employer Identification Number (EIN): 36-1458720

Invoice: 47076967
Purchase Order: PO30969
Release:
McMaster-Carr Number: 5554149-01

ORIGINAL COMMERCIAL

INVOICE

CERTIFICATE OF ORIGIN

Ultimate Destination:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Shipped: 12-Jan-2016

FOB: ORIGIN

Shipper's Export Declaration (SED):
NO EEI 30.36

Intermediate Consignee:

Bill To:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Tax Number:

Forwarding Agent:

Billing
Attention:

Shipping
Attention:

Contact:

Line	Description	Qty & Unit	Unit Price	Extension
1	8672K31 UHMW Polyethylene Trim, Screw Mount, U-Shape, 1" Inside Width Country of Origin: United States Schedule B #: 391610 ECCN #: EAR99 NLR	40 FT	\$3.26	\$130.40
2	9928K53 Impact-Resistant UHMW Polyethylene U-Channel, 1" Base X 3/4" Legs, 1/4" Thick, 8' Long Country of Origin: United States Schedule B #: 391610 ECCN #: EAR99 NLR	24 FT	\$2.28	\$54.72
3	95606A170 Nylon Flat Washer, 7/16" Screw Size, 0.500" ID, 0.688" OD, Off-White, Packs of 100 Country of Origin: United States Schedule B #: 392690 ECCN #: EAR99 NLR	1 PK	\$8.60	\$8.60
4	92311A599 18-8 Stainless Steel Cup Point Set Screw, 5/16"-24 Thread, 5/8" Long, Packs of 50 Country of Origin: Taiwan Schedule B #: 731815 ECCN #: EAR99 NLR	2 PK	\$10.80	\$21.60

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

These commodities, technology, or software were exported from the United States in accordance with Export Administration regulations. Diversion contrary to US law is prohibited.

Shipping Weight (in kgs): 95

Number of Packages: 2

Invoice Amounts:

Merchandise Amount: \$973.97
Canadian GST/HST: \$126.61
Total (in USD): \$1,100.58

Package Dimensions:

Payment Terms: 2% discount on merchandise only if paid within 10 days, net 30 days

Remit payment to:

(by wire transfer)

(by mail)

McMaster-Carr Supply Company
PO Box 7690
Chicago, IL 60680-7690 USA

Bank of America Illinois

231 S LaSalle

Chicago, IL 60697

ABA 071000039 Account 86666-02021

SWIFT BOFAUS3N

Authorized Signature:

Date:

12-Jan-2016

Name: Sarah Weinberg

Title: Operations Mgr.

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